

## REMARKS

**The Examiner Interview:**

Examiners Winkler and Housel are thanked for the personal interview on June 11, 2003. Present were the undersigned, Jeffrey Michael Hammond, co-inventor hereof, and Michael Sheppard, Chief Scientific Officer of Imugene, Ltd., exclusive licensee of this invention. Both Dr. Hammond and Dr. Sheppard are from Australia.

During the interview, issues of long-felt need in the art, commercial success, and unexpectedly improved results of the invention were discussed. Dr. Hammond advised the Examiners of failure as of this date of other groups working on making a porcine adenovirus (PAV) vector to demonstrate protection against disease in pigs. He also advised the Examiners of the recognition he has received for his role in making the invention, including being asked, subsequent to this invention, by a competing group to participate in testing a recombinant vector they had made, being asked to give a seminar in Paris at the 2002 World Virology Congress and the Institute of Animal Health in the U.K., and prepare a review article for The Veterinary Journal on PAV vector vaccines.

Dr. Hammond also advised the Examiners of two unexpectedly improved results achieved by the present invention: (1) the PAV vector of this invention may be used for more than one vaccination of the same animal using the same gene; and (2) larger amounts of heterologous DNA may be inserted into the PAV vector of this invention allowing, for example, both a vaccine antigen and an immune potentiator to be inserted into the same vector.

Dr. Sheppard advised the Examiners of his personal experience over the last decade working with groups involved in the attempt to develop an operative PAV vector and that the present invention represents the first, and so far only, demonstration of such a vector used to protect against disease in pigs. He also advised the Examiners that both Merial and Intervet, the first and third largest animal health companies in the world, had taken sublicenses to the invention, and that the availability of this invention had a very high commercial value because of the need to eliminate antibodies from pig feed.

The differences between human adenovirus vectors (HAV) and PAVs were also discussed, including differences in sequence, structure, and function of the E3 regions of the two viruses to show that publications describing HAV vectors did not enable the art to make effective PAV vectors with any reasonable predictability of success.

The Section 112, second paragraph, rejections and election requirements were also discussed.

Applicants understood the Section 103 rejections and Section 112, second paragraph, rejections will not be maintained.

The Examiners also pointed out inconsistent language in claims specifying "DNA of interest" and "heterologous sequences."

**The Amendments:**

Claims 1, 2, and 26-30 have been amended to replace "DNA of interest" with "heterologous DNA." This amendment is not made for purposes of patentability, but rather for purposes of consistency. Support is found, e.g., in as-filed claim 5. Claim 43 has been canceled as redundant.

**Allowability of the Present Claims:**

Applicants have given to the art an important vector useful for vaccinating pigs against disease. This is a long-sought goal and its achievement is of great benefit to humans. In view of the long-felt need in the art, the present invention is a pioneering invention and as such is entitled to a broad scope of protection. See, e.g., *Perkin-Elmer v. Westinghouse*, 3 USPQ2d 1321, 1323 (Fed. Cir. 1987).

**Conclusion and Request for Rejoinder:**

This application appearing to be in condition for allowance, passage to issuance is respectfully requested. Rejoinder and allowance of claims 45-50 and 52-62 which were withdrawn from consideration is respectfully requested in view of the allowability of the linking claims. It is believed that no fee is due with the submission of this Amendment. If this is incorrect, please charge any required fee or the fee for any additional extension of time required to Deposit Account No. 07-1969.

Respectfully submitted,



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